

OCT 28 1980

CD-80-05 (LDV)

Subject: Deletion of Spark Timing Parameter Adjustment
Requirement

Dear Light-Duty Vehicle, Light-Duty Truck, and Heavy-Duty Engine
Manufacturers:

This letter is to notify you that EPA will not determine ignition spark timing to be subject to adjustment under the parameter adjustment regulations. On August 22, 1980, I wrote to you stating that EPA had re-evaluated its position on idle speed parameter adjustment requirements. At that time I informed you that idle speed would not be considered to be subject to adjustment for 1982 and subsequent model years. Since that time, my staff has reviewed the other parameter adjustment requirements. After considering the latest in-use emission data, approaches being considered by most companies to comply with the requirements, and other relevant factors, we have concluded that the spark timing requirement should be deleted.

When EPA originally promulgated the parameter adjustment regulations, the available data indicated that timing maladjustments occurred in roughly equal and opposite degrees for cases of incorrect advance and retard. The offsetting directions of maladjustment showed a tendency to cancel each other, but a net impact in the direction of higher emissions was observed. However, an even greater benefit of the regulations was anticipated because EPA assumed that manufacturers would opt for designs that would restrict the ability to advance timing, but would provide some flexibility for retarding timing (see Federal Register, volume 44, No. 9, Friday, January 12, 1979, page 2966). The latest data indicates that the equal and opposite occurrences of incorrectly retarded and advanced timing are much more closely offsetting in emissions impact than originally observed. Furthermore, even though some manufacturers indicated during the public comment period that it was infeasible, most designs submitted to EPA employed completely fixed spark timing, rather than the "no advance-limited retard" envisioned by EPA. Hence, much of the benefit EPA expected from the one way adjustable designs will apparently not materialize. The net result is that very little benefits are now expected from this requirement.

This decision, like the previous one on idle speed, applies to light-duty vehicles, light-duty trucks, and heavy-duty engines.

EPA will continue to monitor both idle speed and spark timing under its surveillance program. If it is subsequently determined that adjustment of either of these parameters may significantly effect emissions, EPA may determine either of

these parameters to be subject to adjustment and give appropriate leadtime notice for control of the parameter. Such notice will be consistent with the requirements of 86.082-22(e)(1)(ii) of the regulations. This paragraph states that "in no event will this notification be given later than September 1 of the calendar year two years prior to the model year." In the case of heavy-duty engines, the parameter adjustment requirements were not scheduled to be effective until the 1984 model year. Absent a further showing under §86.082-22(e)(1)(ii) and (iii), these requirements will not be effective for 1984 and subsequent model years.

Sincerely yours,

Michael P. Walsh
Deputy Assistant Administrator
Mobile Source Air Pollution Control (ANR-455)